



PEYC Hybrid Yacht Courses

Introduction:

The Easter, Sunday, Autumn & Winter yacht series are currently run as 'single class' races to get reasonable turnouts. If these races used conventional fixed length courses, the slowest yachts in the fleet could take around 50% longer than the fastest ones because of the potential handicap spread of ~750 to ~1100 PY. Depending on the course selected, this could result in either an unsatisfactorily short race for the fastest yachts or an unachievable course length for the slowest yachts within the time limits. PEYC could use average lap courses, as the dinghies have done for years, but many yacht crews dislike them as boring and repetitive, with course legs that are too short. The hybrid course concept was introduced in 2013 to give a more varied course format, achievable by the slowest yachts while providing satisfactory race durations for the fastest yachts.

Hybrid Course Concept:

A PEYC hybrid course race is essentially two 'back to back' races. A conventional point-to-point race, finishing at a downwind mark, is followed directly by a windward-leeward average lap race finishing at the same mark. The course is selected such that the slowest yacht can complete at least one lap of the average lap section within the absolute time limit. Faster yachts continue to race by completing additional laps of the average lap course until the shorten course signal is displayed. Hence, all yachts in the fleet race for about the same time. The overall elapsed time for each yacht is the sum of its time for the point-to-point round plus its average lap time multiplied by the average number of laps completed by the fleet. Multiplying the average lap time by the average number of laps for the fleet provides a more equitable weighting to the two sections of the race. After the start, the committee boat is positioned to take times as yachts pass the downwind mark. For hybrid course races the SI requirement for the first yacht to finish within the time limit is changed to simply require that all yachts must finish within the extended time limit.

For a handicap range of 150%, the optimum point to point round should be three times the length of the windward-leeward round. All yachts sail the point-to-point round followed by at least one windward-leeward lap for the slowest yacht and typically three laps for the fastest.

Hybrid Course Race Example:

Consider a hybrid race with a 7.5 nm point-to-point course followed by a 2.0 nm average lap windward-leeward course with 150 min absolute time limit. Conditions are F5 wind of 17 kt with no tidal effects. The yachts, sailing to handicap, would achieve these elapsed times:

Yacht	PY handicap	P-P: 7.5 nm	Av-Lap #1: 2 nm	Av-Lap #2: 2 nm	Av-Lap #3: 2 nm
A	750	73.8	93.5	113.2	132.9
B	920	90.6	114.7	138.9	
C	1100	108.3	137.2		

In this example, the three yachts finish within a 6 min period and all hybrid corrected times would be equal. Yacht A would have finished after 94 mins in a conventional race but races an extra 39 mins. Similarly, yacht B would have finished after 115 mins but races an extra 24 mins. If the wind strength drops drastically in a hybrid race, the race officer has the option to 'wind-back' times to the end of the point-to-point course and treat it as a conventional race.

Jim Scott - PEYC Sailing Secretary